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November 7, 2006

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Art Unit 1637

Attn: Mail Stop Amendment

Commissioner for Patents PO Box 1450 Alexandria, VA 22313-1450

Re: U.S. Utility Patent Application

Application No. 10/602,045; Filed: June 24, 2003
For: Molecular Detection Systems Utilizing
Reiterative Oligonucleotide Synthesis

Inventor: Michelle M. Hanna
Our Ref: 2072.0010003/MAC/DJN

Sir:

Transmitted herewith for appropriate action are the following documents:

- 1. Credit Card Payment Form (PTO-2038) in the amount of \$180.00 to cover the Information Disclosure Statement Fee;
- 2. Fourth Supplemental Information Disclosure Statement;
- 3. Form PTO/SB/08A (1 sheet) listing documents (US1-US16 and FP1);
- 4. Form PTO/SB/08B (1 sheet) listing documents (AT21, AR22-AT22, AR23-AT23 and AR24);
- 5. Copies of cited documents (FP1, AT21, AR22-AT22, AR23-AT23 and AR24); and
- 6. Return postcard.

It is respectfully requested that the attached postcard be stamped with the date of filing of these documents, and that it be returned to our courier.

In the event that extensions of time are necessary to prevent abandonment of this patent application, then such extensions of time are hereby petitioned.

Sterne, Kessler, Goldstein & Fox PLLC.: 1100 New York Avenue, NW: Washington, DC 20005: 202.371.2600 f 202.371.2540: www.skgf.com



Commissioner for Patents November 7, 2006 Page 2

The U.S. Patent and Trademark Office is hereby authorized to charge any fee deficiency, or credit any overpayment, to our Deposit Account No. 19-0036.

Respectfully submitted,

STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.

Michele A. Cimbala

Attorney for Applicant

much A. Carlis

Registration No. 33,851

MAC/DJN:dbj Enclosures

604267_1.DOC



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

Michelle M. Hanna

Appl. No.: 10/602,045

Filed: June 24, 2003

For: Molecular Detection Systems

Utilizing Reiterative Oligonucleotide Synthesis Confirmation No.: 8156

Art Unit: 1637

Examiner: Kim, Young J.

Atty. Docket: 2072.0010003/MAC/DJN

Fourth Supplemental Information Disclosure Statement

Mail Stop Amendment

Commissioner for Patents PO Box 1450 Alexandria, VA 22313-1450

Sir:

Listed on accompanying IDS Forms are documents that may be considered material to the examination of this application, in compliance with the duty of disclosure requirements of 37 C.F.R. §§ 1.56, 1.97 and 1.98. The numbering on this Fourth Supplemental Information Disclosure Statement is a continuation of the numbering in Applicant's Third Supplemental Information Disclosure Statement filed on December 13, 2004 in connection with the above-captioned application.

Where the publication date of a listed document does not provide a month of publication, the year of publication of the listed document is sufficiently earlier than the effective U.S. filing date and any foreign priority date so that the month of publication is not in issue. Applicant has listed publication dates on the attached IDS Forms based on information presently available to the undersigned. However, the listed publication dates should not be construed as an admission that the information was accounty published on 01 FC:1806 180.00-OP the date indicated.

> 11/08/2006 MBERHE 00000143 10602045 189.00 OP

01 FC:1806

Applicant reserves the right to establish the patentability of the claimed invention over any of the information provided herewith, and/or to prove that this information may not be prior art, and/or to prove that this information may not be enabling for the teachings purportedly offered.

This statement should not be construed as a representation that a search has been made, or that information more material to the examination of the present patent application does not exist. The Examiner is specifically requested not to rely solely on the material submitted herewith.

Applicant has checked the appropriate boxes below.

- 1. Statement under 37 C.F.R. 1.704(d). Each item of information contained in this Information Disclosure Statement was first cited in a communication from a foreign patent office in a counterpart application and this communication was not received by any individual designated in 37 C.F.R. § 1.56(c) more than thirty days prior to the filing of this information disclosure statement.
- 2. Filing under 37 C.F.R. § 1.97(b). This Information Disclosure Statement is being filed within three months of the date of filing of a national application other than a continued prosecution application (CPA), OR within three months of the date of entry of the national stage as set forth in 37 C.F.R. § 1.491 in an international application, OR before the mailing date of a first Office Action on the merits OR before the mailing of a first Office Action after the filing of a request for continued examination under 37 C.F.R. § 1.114. No statement or fee is required.

- - a. Statement under 37 C.F.R. § 1.97(e)(1). I hereby state that each item of information contained in this Information Disclosure Statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this Information Disclosure Statement. 37 C.F.R. § 1.97(e)(1).
 - b. Statement under 37 C.F.R. § 1.97(e)(2). I hereby state that no item of information in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application and, to my knowledge after making reasonable inquiry, was known to any individual designated in 37 C.F.R. § 1.56(c) more than three months prior to the filing of this Information Disclosure Statement. 37 C.F.R. § 1.97(e)(2).
 - \[
 \infty c. Attached is our PTO-2038 Credit Card Payment Form in the amount of \$180.00 in payment of the fee under 37 C.F.R. §

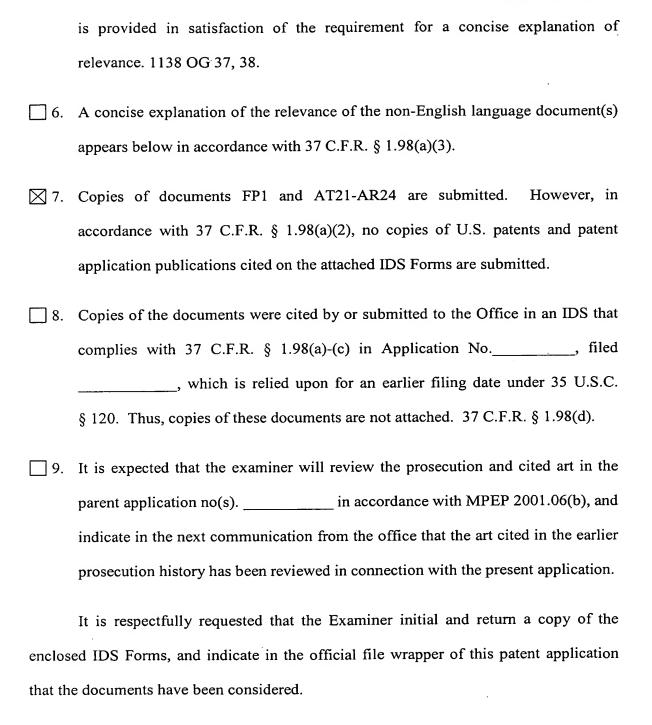
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	filed more than three months after the U.S. filing date and after the mailing date						
	of a Final Rejection or Notice of Allowance, but before payment of the Issue Fe						
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	\$ i	n payment of the fee under 37 C.F.R. § 1.17(p); in addition:					
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		Statement was first cited in any communication from a foreign					
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		three months prior to the filing of this Information Disclosure					
		Statement. 37 C.F.R. § 1.97(e)(1).					
	□ b.	Statement under 37 C.F.R. § 1.97(e)(2). I hereby state that no item					
		of information in this Information Disclosure Statement was cited					
		in a communication from a foreign patent office in a counterpart					
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		inquiry, was known to any individual designated in 37 C.F.R. §					
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		Information Disclosure Statement. 37 C.F.R. § 1.97(e)(2).					

5. The document(s) was/were cited in a search report by a foreign patent office in a

counterpart foreign application. Submission of an English language version of

the search report that indicates the degree of relevance found by the foreign office



Applicant respectfully directs the Examiner's attention to Applicant's copending applications and issued patent (documents US8-US16).

The U.S. Patent and Trademark Office is hereby authorized to charge any fee deficiency, or credit any overpayment, to our Deposit Account No. 19-0036.

Respectfully submitted,

STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.

Michele A. Cimbala

Attorney for Applicant Registration No. 33,851

Timber A. Cirke

Date: November 7, 2006

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T A I	Application Number	10/602,045			
ΓAL	Filing Date	June 24, 2003			
SURE	First Named Inventor	Michelle M. Hanna			
CANT	Art Unit	1637			
sary)	Examiner Name	Kim, Young J.			

2072.0010003/MAC/DJN

Complete if Known

			U.S. PATENT DO			
Examiner	Cite No.1	Document Number	Publication Date	Name of Patentee or	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	
Initials*		Number-Kind Code ^{2 (If Known)}	MM-DD-YYYY	Applicant of Cited Document		
	US1	5,194,370	03-16-1993	Berninger et al.		
	US2	5,246,866	09-21-1993	Nasu et al.	· ·	
	US3	5,503,979	04-02-1996	Kramer et al.		
-	US4	5,597,694	01-28-1997	Munroe et al.		
	US5	5,837,459	11-17-1998	Berg et al.		
	US6	5,846,723	12-08-1998	Kim et al.		
	US7	6,268,131 B1	07-31-2001	Kang et al.		
	US8	7,045,319 B2	05-16-2006	Hanna		
	US9	2004/0054162 A1	03-18-2004	Hanna		
	US10	2004/0137461 A1	07-15-2004	Hanna		
	USII	2004/0157257 A1	08-12-2004	Hanna	·	
***	US12	2004/0175724 A1	09-09-2004	Hanna	•	
	US13	2005/0026150 A1	02-03-2005	Hanna		
	US14	2005/0064414 A1	03-24-2005	Hanna		
	US15	2005/0214796 A1	09-29-2005	Hanna		
	US16	2006/0204964 A1	09-14-2006	Hanna		
	US17					
	US18					
	US19					
	US20					

1		Fo	REIGN PATENT DO	OCUMENTS		
Examiner Initials*	Cite No. ¹	Foreign Patent Document Country Code' Number' Kind Code' (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	Т°
	FP1	EP 0 369 775 A	05-23-1990	Loewy et al.		
	FP2					
	FP3					
	FP4					
	FP5					
	FP6					
	FP7				<u> </u>	
	FP8					
	FP9					

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English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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FOURTH SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Use as many sheets as necessary)				Complete if Known		
				Application Number	10/602,045	
				Filing Date	June 24, 2003	
				First Named Inventor	Michelle M. Hanna	
				Art Unit	1637	
				Examiner Name	Kim, Young J.	
Sheet	1	of	1	Attorney Docket Number	2072.0010003/MAC/DJN	

Examiner	Cite	NON PATENT LITERATURE DOCUMENTS Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of	Γ
Initials*	No.1	the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published	Т
	AT21	Aiyar et al., "A Mismatch Bubble in Double-stranded DNA Suffices to Direct Precise Transcription Initiation by Escherichia coli RNA Polymerase," The Journal of Biological Chemistry 269:13179-13184, American Society for Biochemistry and Molecular Biology, Inc. (1994).	
	AR22	Daube et al., "Coupling of RNA displacement and intrinsic termination in transcription from synthetic RNA DNA bubble duplex constructs," Proceedings of the National Academy of Sciences of the United States of America 9:9539-9543, National Academy of Sciences (1994).	
	AS22	Griep et al., "Fluorescence Energy Transfer Between the Primer and the Beta Subunit of the DNA Polymerase III Holoenzyme," Journal of Biological Chemistry 267:3052-3059, The American Society for Biochemistry and Molecular Biology, Inc. (1992).	
	AT22	Hanna et al., "Topography of transcription: Path of the leading end of nascent RNA through the Escherichia coli transcription complex," Proceedings of the National Academy of Sciences of the United States of America 80:4238-4242, National Academy of Sciences (1983).	
	AR23	Kinsella et al., "RNA Polymerase: Correlation Between Transcript Length, Abortive Product Synthesis, and Formation of a Stable Ternary Complex," Biochemistry 21:2719-2723, American Chemical Society (1982).	
	AS23	Mancini et al., "Constitutively methylated CpG dinucleotides as mutation hot spots in the retinoblastoma gene (RB1)," American Journal of Human Genetics 61:80-87, The American Society of Human Genetics (1997).	
	AT23	Picketts et al., "Differential termination of primer extension: a novel, quantifiable method for detection of point mutations," <i>Human Genetics</i> 89:155-157, Springer-Verlag (1992).	
	AR24	Supplementary European Search Report for European Patent Application No. EP 02 79 5555, mailed August 10, 2006, European Patent Office.	
	AS24		

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Examiner	Date
Signature	Considered

^{*}EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and

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